

30 *Mr. Knott, Observations of Comet II. 1862.*

The following are the assumed mean places of the stars of comparison for 1862, January 0:—

B.A.C. 4527.	R.A.			N.P.D.			Authority.
	h	m	s	°	'	"	
	13	25	49.25	10	38	35.39	British Association Catalogue.
”	4909	14	45	7.31	17	27	30.68
”	4949	14	55	24.07	23	31	2.37
”	5122	15	25	58.19	48	41	38.95
”	6060	17	47	47.94	108	46	23.90

Remarks.

Aug. 18. Nucleus stellar, small and well defined. Tail in large telescope fan-shaped, short, and very bright. In a good opera-glass the tail appeared about 8 degrees long.

23. In the large telescope, with powers 90, 120, and 400, the nucleus was elongated, well defined, small, and bright. In the finder (power 20) the nucleus appeared round, and resembled a star of the 5th magnitude, surrounded with faint nebulous light.

28. Nucleus not so bright as on the 23d, but still well defined and a little elongated. Light of comet more diffused.

Sept. 10. Comet found with an opera-glass. In the large telescope the light was much more diffused than on previous occasions.

Observations of Comet II., 1862. By G. Knott, Esq.

The late fine (and in some respects remarkable) Comet was first seen at this Observatory on August 18th. Unfortunately I was a good deal away from home during its apparition; and this circumstance, coupled with the unsettled state of the weather, prevented my observing it so closely as I should otherwise have done.

At the suggestion of the Rev. T. W. Webb, I measured, or carefully estimated, whenever opportunity offered, the position-angle of the curious fan or jet which streamed from the nucleus; and although I am not inclined to attach much weight to my results, I think they abundantly suffice to show remarkable variations in the direction of the fan, to the extent of more than 50° . The measures were made with a wire micrometer attached to my $7\frac{1}{3}$ -inch Equatoreal, the power employed being 113; and in all cases, unless otherwise stated, the angle is that of a central chord of the jet.

I proceed to give a few extracts from my journal:—

“August 18th. My first view of the comet in the Equatoreal. The nucleus is bright and sharply defined; bears magnifying well. A curious ray or jet proceeds from it, having a position-angle of 280° or 285° .

"August 25th. The nucleus evidently not in the centre of the coma. The jet is much curved. A tangent to the jet near the nucleus would have a position-angle of 235° or 240° .

"August 27th. A fine evening. With the naked eye the tail can be traced for about 20° . In the telescope the tail appears to be double. The inner edge of the longer and brighter branch is sharply defined; one measure gave its initial position-angle $= 75^{\circ}$. The southern branch short and ill-defined. At $8^h 45^m$ G.M.T. five measures gave the position-angle of jet $= 241^{\circ} 5$. Later in the evening, $10^h 40^m$, the position-angle deduced from five measures was $240^{\circ} 8$; approximate length of jet, $46'' \pm$.

"August 29th. Apparently an extraordinary change in the form of the jet. The nucleus very bright, sharply defined, and of an orange tint. The position-angle deduced from five measures at $8^h 30^m$ was $279^{\circ} 0$. Clouds now came up, and further observation was impossible.

"August 30th. The jet appears to have recovered its usual form. The nucleus and jet not well defined; the position-angle of the latter at $9^h 30^m$ estimated at 225° . Later in the evening took measures: the mean of five gave the angle at $10^h 7^m = 225^{\circ} 6$. This was the last occasion on which I saw the Comet."

The marked changes in the position-angle of the jet are sufficiently curious, and I much regret that circumstances did not allow me to obtain a more complete series of measures. I can only hope that other observers have been more fortunate.

Woodcroft Observatory, Cuckfield, Nov. 11, 1862.

Observations of Comet II., 1862. By F. Abbott, Esq.

I herewith send you the approximate positions of a fine Comet, which first made its appearance here at the early part of the month. From the 1st to the 6th the sky was so unusually cloudy as to entirely shut out the Moon's place, and also from the 6th to the 11th, from the latter date it was observed every evening with one exception, the results were chiefly obtained with the first trial of a Dallmeyer's portable Equatoreal, just imported—no correction having been made for instrumental error or refraction—the positions, however, were generally taken near the zenith.

The small sketch enclosed, taken on the 11th, will convey some idea as to the Comet's general appearance. On the 6th, it was distinctly seen in a clear sky with a Moon thirteen days old. On the 11th some measures were made on its curved tail,